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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Item 5 (b) of the provisional agenda
Transport of Gases: miscellaneous

Shells for UN acetylene cylinders

Transmitted by the experts from Canada*

Introduction

1. This document proposes to revise the shell requirements in 6.2.2.1.3 for UN acetylene cylinders to better align with the shell requirements in ISO 3807:2013. ISO 3807:2013 supersedes both ISO 3807-1:2000 and ISO 3807-2:2000 and at the forty-fourth session of the Sub-Committee, the International Organisation for Standardisation (ISO) submitted a formal document (ST/SG/AC.10/C.3/2013/61) and informal documents INF.13 and INF.26 (44th session) which proposed that ISO 3807-1:2000 and ISO 3807-2:2000 be replaced by ISO 3807:2013. ISO 3807:2013 includes new provisions for shells which were not addressed during its adoption.

Proposal

2. Amend the text of 6.2.2.1.3 as shown. New text is underlined and deleted text is ~~struck-out~~.

> 6.2.2.1.3 The following standards apply for the design, construction and initial inspection and test of UN acetylene cylinders, except that inspection requirements related to conformity assessment system and approval shall be in accordance with 6.2.2.5:

* In accordance with the programme of work of the Sub-Committee for 2017–2018 approved by the Committee at its eighth session (see ST/SG/AC.10/C.3/100, paragraph 98 and ST/SG/AC.10/44, para. 14).

For the cylinder shell:

Reference	Title	Applicable for manufacture
ISO 9809-1:1999	Gas cylinders -- Refillable seamless steel gas cylinders -- Design, construction and testing -- Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa ***Note**: The note concerning the F factor in section 7.3 of this standard shall not be applied for UN cylinders.*	Until 31 December 2018
~~ISO 9809-1:2010~~	~~Gas cylinders — Refillable seamless steel gas cylinders — Design, construction and testing — Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa~~	~~Until further notice~~
ISO 9809-3:2000	Gas cylinders -- Refillable seamless steel gas cylinders -- Design, construction and testing -- Part 3: Normalized steel cylinders	Until 31 December 2018
~~ISO 9809-3:2010~~	~~Gas cylinders — Refillable seamless steel gas cylinders — Design, construction and testing — Part 3: Normalized steel cylinders~~	~~Until further notice~~
ISO 3807:2013	Gas cylinders -- Acetylene cylinders -- Basic requirements and type testing	Until further notice

For the porous material in the cylinder

Reference	Title	Applicable for manufacture
ISO 3807-1:2000	Cylinders for acetylene — Basic requirements — Part 1: Cylinders without fusible plugs	Until 31 December 2020
ISO 3807-2:2000	Cylinders for acetylene — Basic requirements — Part 2: Cylinders with fusible plugs	Until 31 December 2020
ISO 3807:2013	Gas cylinders -- Acetylene cylinders -- Basic requirements and type testing	Until further notice

Justification

3. Unlike ISO 3807-1:2000 and ISO 3807-2:2000, ISO 3807:2013 includes technical requirements for the cylinder shell. ISO 3807:2013 allows shells to be manufactured in accordance with ISO 9809-1, ISO 9809-3, ISO 4706, or ISO 7866, all of which are standards referenced for the design, construction and initial inspection and test of UN cylinders in 6.2.2.1.1. As written, 6.2.2.1.3 only authorises shells manufactured in accordance with ISO 9809-1 or ISO 9809-3. This change will also allow shells manufactured in accordance with ISO 4706 or ISO 7866, which was the intent of the technical experts who developed ISO 3807:2013.